

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

Trade Name: Gold Chloride
Chemical Nature: Gold Salt
Synonyms: Gold III Chloride
Formula: AuCl₄ * H₂O

II HAZARDOUS INGREDIENTS

TLV: 1.0 mg/m³

III PHYSICAL DATA

Boiling Point 760 mm Hg: Decomposes
Solubility in Water: Very soluble
Vapor Pressure: N/A
Appearance and Odor: Yellow-orange crystal powder. Faint chlorine odor.
Melting Point: Decomposes
Specific Gravity (H₂O=1): N/A
Vapor Density (air=1): N/A

IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point (Method used): N/A
Flammable Limits in Air: Lower: N/A **Upper:** N/A
Autoignition Temperature: No Data

Extinguishing Media: Use CO₂, foam, or dry chemical.
Special Fire Fighting Procedures: Self contained breathing apparatus.
Unusual Fire and Explosion Hazards: May emit toxic fumes of Cl⁻ on decomposition.

V HEALTH HAZARD DATA

Effects of Over-exposure: Poison, strong skin, eye, and mucous membrane irritant.
Other Health Hazards: To the best of our knowledge the acute and chronic toxicity of this substance has not been fully investigated

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: Seek immediate medical attention.
SKIN: Remove contaminated clothing, flood skin with large amounts of water. Seek medical assistance as necessary, especially if irritation develops or persists.
EYE: Immediately flush eyes, including under eyelids, with large amounts of water for at least 15 minutes. Call a physician.
INHALATION: Remove from exposure, seek immediate medical attention.

VI REACTIVITY DATA

Stability: Unstable
Incompatibility (Materials to Avoid): Ferrous sulfate, organics, NH₃, Zn, KCN, reducing agents, and ammonia.

Hazardous Decomposition Products: HCl, Cl₂, contact with NH₄OH yields explosive products.
Hazardous Polymerization: Will not occur

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Sweep up and place in airtight plastic container.

Waste Disposal: Ship to precious metal refiner.

VIII SPECIAL PROTECTION INFORMATION

Ventilation Requirements: Local exhaust, mechanical.

Respiratory Protection: NIOSH/MSHA approved breathing apparatus.

Eye/Face Protection: Goggles

Protective Gloves: Rubber
Other Protective Equipment: Use under film hood, normal lab wear.

IX SPECIAL PRECAUTIONS

Other Handling and Storage Conditions: Keep container tightly closed. Store in a cool, dry, well-ventilated area. Wash thoroughly after use.

Special Labels: Keep tightly closed, read MSDS before using, Hygroscopic. In compliance with OSHA and NFPA requirements.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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